MONITOR WELL PRE-SPUD PROPOSAL

1)   WELL NAME/NUMBER: <u>BLM-24</u>

2)   PROPOSED LOCATION: (a) General (on or off-site) <u>Off-site</u>

(attach map)   Site Area <u>BLM Land</u>

(b)   Sect <u>34</u>   Twnshp <u>20S</u>   Rng <u>3E</u>   NE ¼ NW ¼ SE ¼ NW ¼

3)   WELL PARAMETERS:

(a)   Est. total depth <u>500</u> (ft)   (b) Est. ground elevation <u>@4716</u> ft

(c)   Anticipated stratigraphy:

<u>Alluvium (Santa Fe Group)</u>   from <u>0</u> ' to <u>265'</u> ' (depth)

<u>Andesite (or possibly Tuff)</u>   from <u>265</u> ' to <u>TD</u> ' (depth)

(d)   Anticipated water bearing horizon(s):

<u>Andesite (or Tuff)</u>   at <u>365</u> ' (depth)

at _____ ' (depth)

(e)   Anticipated static water level <u>290</u> ' (depth)

4)   WELL PURPOSE/JUSTIFICATION (attach maps and table if needed):

<u>To determine internal plume characteristics and assess location for possible saturated</u>

<u>alluvium.</u>

5)   PROPOSED DRILLING PARAMETERS:

(a)   Drilling method(s): (air/foam/mud rotary/auger/etc.)

<u>Mud Rotary</u>   from <u>0</u> ' to <u>100</u> ' (max)

<u>Air Foam Rotary</u>   from <u>100</u> ' to <u>TD</u> ' (depth)

Air-foam method: "Quik-Foam" surfactant/water mixture used in conjunction with filtered compress air.

Mud-rotary method: Bentonite mud/water mixture.

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    (b)   Lithology sampling - collect sample every:

        <u>5' intervals</u> Method <u>Grab</u> from <u>   0   </u>' to <u>   TD   </u>' (depth)

        Core type <u>6" Dennison</u> from <u>   </u>' to <u>   </u>' (depth)

        <u>2" Christiansen</u> from <u> 300 </u>' to <u> 310 </u>' (depth)
                                            if needed

    (c)   Anticipated drilling additive(s): <u>   E-Z mud   </u>

7) PROPOSED WELL COMPLETION DESIGN/MATERIALS

    (a)   Casing:

	<u>Material</u>	<u>Diameter</u>	<u>From</u>	<u>To</u>	<u>Comments</u>
Temporary					
Surface		10"	0	100' max	
Screen (10')	Stainless ++	4"	To be determined from Geophysical logs		0.02"
Completion Pipe	stainless +	4"	0	TD	*

Standard material: Blank riser, silt trap, locking cap

N/A	Data not available at this time
*	for deep completions (450 feet or more)
**	for shallow completions
+	Type 304, Schedule 5 stainless steel
	Type 304, Schedule 10 stainless steel
++	Regular strength screen, extra strength screen used below 450 feet

    (b)   Filter pack: Standard 8/20 and 16/40 sand and bentonite plug(s), grout to surface.

8) PROPOSED WELL DEVELOPMENT

    (a)   Surge and bail with surge block and bailer.

    (b)   Pump with submersible pump until parameters stabilize.

9) WELL AUTHORIZATION

    (a)   Proposed by Geoscience Consultants, Ltd.

    (b)   Authorized <u>Robert Mitchell</u>   <u>NASA</u>
                    (name)   (representing)   (signature)